AMENDED SET OF CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method for producing a steel rail having a high content of carbon, wherein the rail contains, in mass%,

C: more than 0.85% but less than or equal to 1.40%,

Si: 0.05 to 2.00%,

Mn: 0.05 to 2.00%,

B: 0.0001 to 0.0050%,

N: 0.0060 to 0.0200%,

optionally one or more selected from

Cr: 0.05 to 2.00%,

Mo: 0.01 to 0.50%,

Co: 0.003 to 2.00%,

Cu: 0.01 to 1.00%,

Ni: 0.01 to 1.00%,

Ti: 0.0050 to 0.0500%,

Mg: 0.0005 to 0.0200%,

Ca: 0.0005 to 0.0150%,

Al: 0.0100 to 1.00%,

Zr: 0.0001 to 0.2000%,

V: 0.005 to 0.500% and

Nb: 0.002 to 0.050%, and

the balance being Fe and unavoidable impurities, comprising:

finish rolling said rail in two consecutive passes, with a reduction rate per pass of a cross-section of said rail of 2-30%,

wherein conditions of said finish rolling satisfy the following relationship:

~~$S \leq CPT1$~~ $S \leq CPT1 \leq 0.97$

wherein CPT1 is the value expressed by the following expression 1

$CPT1 = 800 / (C \times T)$ (expression 1)

wherein

S is the maximum rolling interval time (seconds) and is more than or equal to 0.10 seconds and less than or equal to 0.85 seconds, and

$(C \times T)$ is defined as follows;

C is the carbon content of the steel in mass%, and T is the maximum surface temperature (°C) of a rail head.

2. (Currently Amended) A method for producing a steel rail having a high content of carbon in mass%,

C: more than 0.85% but less than or equal to 1.40%,

Si: 0.05 to 2.00%,

Mn: 0.05 to 2.00%,

B: 0.0001 to 0.0050%,

N: 0.0060 to 0.0200%,

optionally one or more selected from

Cr: 0.05 to 2.00%,

Mo: 0.01 to 0.50%,

Co: 0.003 to 2.00%,

Cu: 0.01 to 1.00%,

Ni: 0.01 to 1.00%,

Ti: 0.0050 to 0.0500%,

Mg: 0.0005 to 0.0200%,

Ca: 0.0005 to 0.0150%,

Al: 0.0100 to 1.00%,

Zr: 0.0001 to 0.2000%,

V: 0.005 to 0.500% and

Nb: 0.002 to 0.050%, and

the balance being Fe and unavoidable impurities, comprising:

finish rolling said rail in three or more passes, with a reduction rate per pass of a cross-section of said rail of 2-30%,

wherein conditions of said finish rolling satisfy the following relationship:

~~$S \leq CPT2$~~ $S \leq CPT2 \leq 0.98$

wherein CPT2 is the value expressed by the following expression 2,

$CPT2 = 2400 / (C \times T \times P)$ (expression 2)

wherein

S is the maximum rolling interval time (seconds) and is more than or equal to 0.10 seconds and less than or equal to 0.85 seconds, and

$(C \times T \times P)$ is defined as follows;

C is the carbon content of the steel rail in mass%, and

T is the maximum surface temperature (°C) of a rail head, and P is the number of passes, which is 3 or more.

3-12. (Cancelled)

13. (Previously Presented) The method according to claim 1, wherein chemical composition(s) included in said rail meet the following relationship:

$0.30 \geq V(\text{mass}\%) + 10 \times Nb(\text{mass}\%) + 5 \times N(\text{mass}\%) \geq 0.04$.

14. (Previously Presented) The method according to claim 1, further comprising:

immediately after said finish rolling, cooling the surface of said rail head at a cooling rate of 2-30°C/sec. until the surface temperature reaches 950-750°C.

15. (Original) The method according to claim 14, further comprising:

after said cooling step, when the temperature of the rail head is more than 700°C, cooling the surface of the rail head at a cooling rate of 2-30°C/sec. until the surface temperature reaches at least 600°C; and then

allowing the rail to further cool at room temperature.

16. (Previously Presented) The method according to claim 1, further comprising:

after said finish rolling process, when the temperature of the rail head is more than 700°C, cooling the surface of the rail head at a cooling rate of 2-30°C/sec. until the surface temperature reaches at least 600°C, and then

allowing the rail to further cool at room temperature.

17. (Previously Presented) The method according to claim 2, wherein chemical composition(s) included in said rail meet the following relationship:

$0.30 \geqq V(\text{mass}\%) + 10 \times Nb(\text{mass}\%) + 5 \times N(\text{mass}\%) \geqq 0.04$.

18. (Previously Presented) The method according to claim 2, further comprising:

immediately after said finish rolling, cooling the surface of said rail head at a cooling rate of 2-30°C/sec. until the surface temperature reaches 950-750°C.

19. (Previously Presented) The method according to claim 18, further comprising:

after said cooling step, when the temperature of the rail head is more than 700°C, cooling the surface of the rail head at a cooling rate of 2-30°C/sec. until the surface temperature reaches at least 600°C; and then

allowing the rail to further cool at room temperature.

20. (Previously Presented) The method according to claim 2, further comprising:

after said finish rolling process, when the temperature of the rail head is more than 700°C, cooling the surface of the rail head at a cooling rate of 2-30°C/sec. until the surface temperature reaches at least 600°C, and then

allowing the rail to further cool at room temperature.

21. (New) The method according to claim 1, wherein the rail contains, in mass%, Zr: 0.0001 to 0.2000%.

22. (New) The method according to claim 2, wherein the rail contains, in mass%, Zr: 0.0001 to 0.2000%.